

ABSTRACT

A chemical vapor deposited, β phase polycrystalline silicon carbide having a high thermal conductivity and reduced stacking faults. The silicon carbide is synthesized under specific conditions using hydrogen gas and methyltrichlorosilane gas as reactants. The thermal conductivity of the silicon carbide is sufficiently high such that it can be employed as parts of apparatus and components of electrical devices where a high heat load is generated. Such components may include active thermoelectric coolers, heat sinks and fans.

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